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**Federal Communications Commission**  
**Washington, DC**

Comment Re: Proceeding 03-104

**Greetings:**

I have been a licensed Amateur Radio Operator since 1968. My current Amateur Radio call sign is KQ7T. I have also held WN7HFY, WA7HFY, KH8AK, and AH8AH. I have worked as a broadcast engineer or in related fields, either as an employee or as a contractor, since 1970. I hold the Certified Professional Broadcast Engineer certification from the Society of Broadcast Engineers. I hold an FCC General Radiotelephone License, and previously held a First Class Radiotelephone License. During my career in broadcasting, my work product has frequently been submitted to the FCC and has been acceptable. In view of the foregoing, please consider my comment:

I have read the exposition and commentary of Ed Hare, W1RFI, Laboratory Manager at the American Radio Relay League, regarding PLC, and I am convinced that implementation of this technology would have devastating effects on Amateur Radio communications if utilized in the manners that have previously been tested and rejected in Japan and elsewhere. It is the intent of this comment to discourage the adoption of this technology in the United States.

In addition to the detrimental effects this technology would have on Amateur Radio communications, it is worthwhile to consider the effect it would certainly have on AM Radio communications, and on other Medium Wave and Short Wave communications. Because of the square-wave nature of data, I am concerned about the potential for interference on frequencies not used by the raw data, but on odd-order harmonic frequencies of these, as well. The transmitting device could be entirely clean, and by diode action on a slightly conductive power line insulator, or by diode action due to a cable-clamp wire-to-wire connection, these frequencies could be generated by the power lines themselves. Thus, I believe that studies need to be made to determine the effect on frequencies extending well above HF.

In addition to the potential to interference to radio receivers, PLC is subject to interference from radio transmitters. Power lines, being exceedingly effective long wire antennas, have been shown experimentally to be worthwhile as receiver feeders. When I was young, I built a crystal radio. I erected a long wire antenna on the roof of the house, and I tied a wire to a water pipe for

ground. It worked well. But it did not work any better than a device that capacitively coupled Radio Frequency energy from the power line to the same crystal radio receiver.

One issue that has not been made clear to me is the need for PLC devices. To illustrate my point, please allow me a moment in Memory Lane, and I'll invite you along. I was the Chief Engineer of a television station. It was time for Capital Budget requests. I needed a Spectrum Analyzer in the worst way, to keep the station in compliance and operational. We were constantly having to borrow one from another station in the group. I told the General Manager that during the previous year, I had needed to borrow the instrument from the other station for eight of the previous twelve months. I told him that having convenient access to an instrument would be beneficial to both stations. He looked at me with a bit of fire in his eye, and told me we were not buying things for convenience.

In the same vein, I would strongly discourage the adoption of technologies which are certain to interfere with current or possible future services, merely on the basis of convenience. There are alternative means to achieve data interconnectivity which are inexpensive, effective, not harmful to other services, and not subject to interference from outside sources. The mere fact that the power lines are there may seem attractive, but I believe Mr. Hare of the ARRL has adequately shown the attractiveness to be merely the burnished surface of a hollow device.

Best Regards,

Tom Norman